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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/352,563	07/13/1999	RAMANA V. GOLLAMUDI	1400.4100210	2433

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MARKISON & RECKAMP PC
ATTN: PAUL M. ANDERSON
115 WILD BASIN ROAD
SUITE 107
AUSTIN, TX 78746

EXAMINER

EMDADI, KAMRAN

ART UNIT	PAPER NUMBER
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2664

DATE MAILED: 07/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/352,563

Applicant(s)

GOLLAMUDI, RAMANA V.

Examiner

Kamran Emdadi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 15-28, 31-34 is/are rejected.
- 7) ☐ Claim(s) 13, 14, 29 and 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 July 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-7, 15, 16, 19-23, and 31-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Pitcher (US Patent No. 6370142).
 - Regarding claims 1, 2, 4 and 5, Pitcher teaches: a forwarding engine can use a forwarding table to determine routing information, and the routing information is seen by at least one member of the group as compared to the

viewable registration of the group members that are known to the forwarding engine (Col 9, lines 52-62).

- Regarding claim 3, Pitcher further teaches a forwarding table is maintained per VLAN which includes a group list per group (Col 7, lines 35-38).
- Regarding claims 6 and 7, Pitcher further teaches: the group lists are maintained dynamically upon receipt of membership reports and the information is added as necessary to the list (Col 7, lines 56-64).
- Regarding claims 15 and 16, Pitcher teaches of a forwarding table being used to determine the forwarding of packets and in response to information provided by a multicast group effort of identifying the list of group members (figure 6) the second requirement possibility for claim 16 is taught above by Pitcher for groups being identified by forwarding tables.
- Regarding claims 19-23, 31 and 32, Pitcher further teaches of a processor having memory that carries out the invention's functionality as described above, 310 (figure 9).

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 8 –12 are rejected under 35 U.S.C. 102(b) as being anticipated by Callon (US Patent No. 5430727)

- Regarding claims 8-11, Callon teaches: a router is a forwarding device (Col 13, line 35-37), an internal forwarding table is used to determine the destination address (Col 57, lines 39-44) and the same for external forwarding tables (Col 57, lines 50-55) where the routers know the other routers within the respective forwarding tables (Col 58, lines 60-65).
- Regarding claim 12, Callon teaches of updating tables by level-2 routers which are taught as external type routers above (Col 45, lines 12-15), also the need for a full update in a system with internal and external forwarding tables must be done periodically (Col 52, lines 5-8).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 17,18,24-28, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pitcher (US Patent No. 6370142) in view of Callon (US Patent No. 5430727).

- Regarding claim 17, Pitcher teaches all of the components of the claimed invention except a internal and external forwarding table acknowledged to be a part of a at least one forwarding table. Callon as mentioned above

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describes an internal and external forwarding table both being used in part of a main forwarding database to encompass both the internal and external network routers as possible paths for forwarding data (Col 58, lines 17-21). Therefore it would have been obvious to one skilled in the art at the time the invention was made to have included both an internal and external forwarding table in reference to a single forwarding table to provide the routers with the necessary option to communicate with both internal and external routers in order to find the best and most efficient route to use in a networking environment.

- Regarding claim 18 as described above in claim 12 rejection, Pitcher fails to teach of updating any type of table based on network devices, Callon teaches of a updating the table in order to provide the most updated information for efficient routing (Col 45, lines 10-16). Therefore it would have been obvious to have included an updating scheme to the forwarding tables for more updated information.
- Regarding claims 24-28, 33 and 34 Pitcher teaches the use of a processing module with memory to do all of the necessary functions as described above except:
- For claim 33, incorporate the use of internal and external forwarding tables into the distributed network, Callon teaches: an internal and external forwarding table both being used in part of a main forwarding database to encompass both the internal and external network routers as possible paths

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for forwarding data and to be used, and a router is a forwarding device (Col 13, line 35-37)

- For claim 34, updating the table in order to provide the most updated information for efficient routing (Col 45, lines 10-16),
- For claims 24-28 an internal forwarding table is used to determine the destination address (Col 57, lines 39-44) and the same for external forwarding tables (Col 57, lines 50-55) where the routers know the other routers within the respective forwarding tables (Col 58, lines 60-65), and updating tables by level-2 routers which are taught as external type routers above (Col 45, lines 12-15), also the need for a full update in a system with internal and external forwarding tables must be done periodically (Col 52, lines 5-8) as a means to have both external and internal forwarding tables as part of the main database of forwarding information. Therefore it would have been obvious to one skilled in the art at the time the invention was made to have used both the internal and external forwarding tables within the processing module's memory to provide the same type of efficiency in a network as mentioned above while having a reasonable hardware configuration of a processor and a memory unit as part of the physical networking environment.

Allowable Subject Matter

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8. Claims 13, 14, 29 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
9. The following is a statement of reasons for the indication of allowable subject matter:
The prior art fails to teach or render obvious the following claimed features:
 - Regarding claims 13 and 14 the use of a second internal and external forwarding table to forward to a second corresponding forwarding engine, and the multiplexing of the second internal and external forwarding tables.

Conclusion

The prior art made to record and not relied upon is considered pertinent to applicant's disclosure:

- Dobbins (US Patent No. 5509123) discloses an alternative architecture for routing at the network layer.
 - Dobbins (US Patent No. 5951649) discloses an forwarding engine interface related system.
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kamran Emdadi whose telephone number is (703) 305-4899. The examiner can normally be reached between the hours of 8am and 5pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin, can be reached at (703) 305-4366. The fax phone

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numbers for the organization where this application or proceeding is assigned is (703) 872-9314 for regular communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Kamran Emdadi

07/09/2002



RICKY NGO
PRIMARY EXAMINER